

REMARKS

Claims 22 and 26 through 43 are pending in the present application. Applicant proposes amending claims 22, 42, and 43.

All pending claims stand rejected under 35 U.S.C. § 103(a).

Reconsideration is respectfully requested in view of the above amendments and the following remarks.

Prior Art Rejections

Claims 22, 31, 33, 34, and 41-43 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. patent publication 2004/0204199 (hereinafter “Zax”) in view of U.S. patent 5,508,709 (hereinafter “Krenz”). Claim 26 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zax in view of Krenz and further in view of U.S. patent 7,162,209 (hereinafter “Ono”). Claims 27-30, 32, and 35-40 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Zax in view of Krenz, and Ono, and further in view of U.S. patent 6,792,246 (hereinafter “Takeda”).

Applicants disclose:

first and second mechanical coupling elements that cooperate to mechanically couple the first and second components so as to allow movement of at least one of the first and second components relative to the other, wherein each of the first and second mechanical coupling elements provides a respective signal coupling means and the signal coupling means cooperate to enable wireless coupling of a signal from one of the first and second components to the other of the first and second components. (Specification at ¶ [0006]).

In one disclosed embodiment:

[0039] [a]s shown in FIGS. 1 and 2, **the mechanical coupling between the main body and the display screen is in the form of a hinge assembly 202** as is conventional for such video cameras. However, . . . the multi-wire cable connection (generally a flat ribbon cable) normally provided within the hinge

assembly to electrically connect the main body and the display screen is replaced by capacitive wireless coupling.

[0040] As can be seen most clearly in FIG. 2, in this example **the hinge assembly comprises first and second aligned but spaced-apart hinge members 101 and 102 carried by the main body 200 and a third elongate hinge member 103 carried by the display screen 201.** Alternatively the third elongate hinge member 103 may be carried by the main body 200 and the hinge members 101 and 102 by the display screen 201.

[0041] **The ends of the third hinge member have chamfered projecting regions 104 and 105 which are received in respective complementarily chamfered recesses (only one 106 of which can be seen in FIG. 2) of the first and second hinge members 101 and 102 so that the third hinge member 103 can rotate about its axis relative to the first and second hinge members.** The axis of the third hinge member thus defines the axis of rotation of the display screen 201 relative to the main body 200 of the video camera. **In this example, the capacitive wireless coupling comprises two capacitive couplers each consisting of two capacitive coupling elements separated by a dielectric. Each capacitive coupling element is a circular electrically conductive plate 205 or 206. The capacitive coupling elements 205 are fitted into the recesses 106 of the first and second hinge members and the capacitive coupling elements 206 are carried by the projecting regions 104 of the third hinge member 103 to define two sets of parallel spaced-apart electrically conductive plates that are coaxial with the rotation axis of the hinge.** The dielectric may simply be air or could be any suitable material providing the required dielectric and friction properties, for example a plastics material such as polyethylene or polytetrafluorethylene (PTFE) (which has the advantage of a very low coefficient of friction), or a ceramics material. (Specification at ¶¶ [0039]-[0041]).

Amended claim 22 recites:

An apparatus comprising first and second components having respective first and second mechanical coupling elements that cooperate to allow relative movement of the first and second

components, **the first mechanical coupling element comprising a recess formed therein and the second mechanical coupling element comprising a projection adapted to be movably fitted in the recess,**

wherein **the first mechanical coupling element comprises a first conductive plate positioned in the recess and the second mechanical coupling element comprises a second conductive plate positioned on the projection, the first conductive plate having a first continuous surface extending diametrically across the first conductive plate, the second conductive plate having a second continuous surface extending diametrically across the second conductive plate, and the first conductive plate positioned in the recess and the second conductive plate positioned on the projection so that the first continuous surface is positioned substantially parallel to the second continuous surface when the projection is fitted in the recess,**

further wherein the second conductive plate is configured to wirelessly couple a signal from one of the first and second components to the other of the first and second components.

In order for a set of references to render this claim obvious, the references must disclose each and every element of the recited claim language and suggest combining the elements into the recited combination. Applicants respectfully submit that the cited references do not disclose or suggest the above-emphasized claim language and therefore cannot possibly suggest the recited combination.

Zax discloses a hand held communications device. The device 10 comprises a first flip portion 14 and a second flip portion 16, both of which are pivotal with respect to a base portion 12 around a hinge 18. (Zax at Abstract, ¶ [0022]). Hinge 18 includes a hinge spring 402, a hinge spring knuckle 404, and knuckle 408. Hinge spring 402 includes a protrusion 410 which is received into aperture 414 formed in hinge spring knuckle 404. (Zax at ¶ [0038]). Knuckle 408 includes a protruding ring 414 that rotatingly engages with a hinge hub 416 located on the second flip portion 16. (Zax at ¶ [0038]). Circuitry in the base portion 12 communicates with circuitry in the first flip portion 14 via “a suitable connector 208, flexible connector, optical coupler or any other suitable coupling mechanism.” (Zax at ¶ [0023]).

Thus, Zax discloses a communication device wherein a protrusion formed in one component of the device is received in an aperture formed in another component of the device. But as acknowledged by the Office, Zax does not disclose “the first mechanical coupling element compris[ing] a first conductive plate positioned in the recess and the second mechanical coupling element compris[ing] a second conductive plate positioned on the projection.” Applicants note that Zax also does not disclose or suggest:

the first conductive plate having a first continuous surface extending diametrically across the first conductive plate, the second conductive plate having a second continuous surface extending diametrically across the second conductive plate, the first conductive plate positioned in the recess and the second conductive plate positioned on the projection so that the first continuous surface is positioned substantially parallel to the second continuous surface when the projection is fitted in the recess.

The Office argues that *Krenz* discloses a “first mechanical coupling comprising a first conductive plate and a second mechanical coupling element comprises a second conductive plate.” Applicants respectfully request reconsideration. *Krenz* discloses a flip phone with an integrated antenna. A transformer, having a winding in the flip element and a winding in the housing, couples electromagnetic energy across the hinge. (*Krenz* at Abstract). More particularly, *Krenz* discloses a flip element 104 with two hinge knuckles 112 and a housing with two supporting knuckles 116 and 118. (*Krenz* at Col. 2, ll. 32-35). An axis 206 extends through the knuckles 112, 116, and 118 and secures the flip element to the housing. (See *Krenz* at Figs. 2, 3, and 6). A thin metal loop winding 201 is formed in flip element hinge knuckle 112, (*Krenz* at Col. 2, ll. 55-57), while a thin metal loop winding 301 is formed in housing central knuckle 114. (*Krenz* at Col. 2, ll. 63-66). Windings 201 and 301 are encircle axis 206, (*Krenz* at Figs. 2, 3, and 6), and are positioned coaxially and opposite each other so as to provide electrical communication between the flip element and the housing. (*Krenz* at Col. 3, ll. 1-5).

Thus, Krenz discloses a flip phone with an axis running through knuckles 112, 116, and 188 and with windings 201 and 301 formed around the axis. In contrast with claim 1, Krenz does not disclose or suggest:

the first mechanical coupling element comprises a first conductive plate positioned in the recess and the second mechanical coupling element comprises a second conductive plate positioned on the projection . . .

Rather, Krenz discloses windings 201 and 301 which are formed around the axis that connects knuckles 112, 116, and 188. *Windings* 201 and 301 are *not* “a first conductive **plate**” and “a second conductive **plate**.” Windings 201 and 301 are most certainly not a

[a] first conductive plate **having a first continuous surface extending diametrically across the first conductive plate**, [and
a] second conductive plate **having a second continuous surface extending diametrically across the second conductive plate**.

To the contrary, windings 201 and 301 have a *donut* shape entirely devoid of a “continuous surface extending diametrically across the first conductive plate.” Furthermore, because Krenz does not disclose a “first conductive plate having **a first continuous surface extending diametrically across the first conductive plate**” and a “second conductive plate **having a second continuous surface extending diametrically across the second conductive plate**,” it cannot possibly disclose

the first conductive plate positioned in the recess and the second conductive plate positioned on the projection so that the first continuous surface is positioned substantially parallel to the second continuous surface when the projection is fitted in the recess.

Not only do neither Zax nor Krenz disclose the recited claim language, but one skilled in the art at the time of Applicants’ invention, upon reviewing Zax and Krenz would **not** arrive at the claimed combination. Zax discloses a projection from a first knuckle being received into an aperture formed in a second knuckle. Krenz discloses a first donut shaped winding in a first knuckle and second donut shaped winding in a second knuckle with the windings surrounding an

axis that extended into the knuckles. One skilled in the art upon considering Zax and Krenz would be motivated to place a first donut shaped winding **around** the aperture formed in a first knuckle and a second donut shaped winding in the second knuckle **around** the projection extending from the second knuckle. But one skilled in the art would **not** be motivated by Zax and Krenz to form a “first mechanical coupling element comprising a first conductive plate positioned **in the recess** and the second mechanical coupling element comprises a second conductive plate positioned **on the projection** . . . **the first conductive plate positioned in the recess and the second conductive plate positioned on the projection so that the first continuous surface is positioned substantially parallel to the second continuous surface when the projection is fitted in the recess.**”

The Office does not allege that the remaining references *Ono* and *Takeda* disclose the above emphasized claim language. And, in fact, Ono and Takeda do not disclose or suggest the recited claim language for at least the reasons discussed in the reply filed on February 18, 2009.

Therefore, because the cited references do not disclose or even suggest the recited claim elements, the references cannot possibly disclose the recited combination. Accordingly, claim 22 and its dependent claims are not rendered obvious. Although their language is different from that of claim 1, claims 42 and 43 patentably define over the cited references for reasons analogous reasons to those discussed above.

Reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 and 103 is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, applicants submits that the above-identified application is in condition for allowance. Early notification to this effect is respectfully requested. If the Examiner has any questions regarding this response, the Examiner is invited to contact the undersigned attorney at (215) 568-3100.

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